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The Impact of Peer and Family Functioning on Transgender and Gender-Diverse Children's Mental Health

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Abstract

Although high levels of internalizing and externalizing psychopathology have been documented among transgender and gender-diverse (TGD) youth, contextual factors influencing the development of psychopathology among TGD children are relatively understudied. The current study tested the interaction between two relational factors, children's caregiver-reported peer relations and family functioning, on TGD children's internalizing and externalizing symptoms. The sample consisted of 49 primary caregivers of TGD children, who were age 6–12 at baseline. A cross-sectional path analysis was run to test the relations between peer relations, family functioning, and their interaction on internalizing and externalizing symptoms. A longitudinal path analysis was run to test the relations between variables over time. In the cross-sectional model, among families with adequate family functioning, peer problems were associated with greater internalizing symptoms. Among families that were functioning poorly, there was not a significant relationship between peer problems and internalizing symptoms. Further, among children who did not experience peer problems, poorer family functioning was associated with greater internalizing symptoms. Peer problems, but not family functioning or the interaction term, was associated with externalizing symptoms. Longitudinal analyses did not support the hypothesis of an interaction between peer relations and family functioning. The current research indicated that poor peer relations and poor family functioning each confer risk for internalizing symptoms among TGD children, and poor peer relations carries risk for externalizing symptoms among TGD youth.

Keywords

transgender; transgender youth; peer relations; family functioning; psychopathology

High levels of psychopathology have been reported among transgender and gender-diverse (TGD) youth (e.g., Aitken et al. 2016; Perez-Brumer et al. 2017); that is youth who do not conform to societal expectations of their gender behavior or presentation. Yet, some smaller samples of TGD youth have not exhibited elevated levels of psychopathology (e.g., Olson et al. 2016). In order to understand the development of internalizing (e.g., tearfulness; anxiety;

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social withdrawal) and externalizing (e.g., lying; truancy; aggressive behavior) symptoms among TGD children, it is necessary to understand the contexts in which TGD children develop. Indeed, these contexts may promote or buffer risk for developing internalizing and externalizing symptoms, and explain the heterogeneity in the documented prevalence of psychopathology among TGD children. Specific relational factors, such as TGD children's peer relationships and the functioning of their families, may impact their risk of developing internalizing and externalizing symptoms. Identifying whether and how these relational contexts interact to promote or buffer internalizing and externalizing symptoms is key, as it would enable improved identification of TGD children who are most at risk of developing psychopathology.

The phrase "transgender and gender-diverse" encompasses a wide range of gender identities, and this heterogeneity is reflected in the existing literature; prior research on TGD youth have varied in terms of the inclusion criteria utilized during recruitment. For example, prior research has at times utilized strict inclusion criteria, such as a clinical diagnosis of gender identity disorder (Cohen-Kettenis et al. 2003; Hill et al. 2010) or a binary transgender identity (Olson et al. 2016). Others recruited participants with a broader range of gender identities, including youth who were nonbinary and gender expansive (i.e., they did not adhere to traditional, binary notions of gender and may have a broader experience of gender than fits into a binary gender system; Kuvalanka et al. 2017; Riley et al. 2013). Because of the heterogeneity of prior samples, and to align with language used by the American Academy of Pediatrics (Rafferty 2018), the inclusive term "TGD" will be used throughout this paper, with additional notation indicating the specific samples used in prior research to ensure that the research is represented accurately.

There is notable variability in the documented prevalence of internalizing and externalizing symptoms among TGD youth. Research on children and adolescents has provided evidence for an association between gender nonconformity and internalizing symptoms, including anxiety symptoms (Wallien et al. 2007), depressive symptoms (Roberts et al. 2013), internalizing symptoms, broadly (Reisner et al. 2015; Zucker et al. 2002, 2012), and suicidal ideation (Perez-Brumer et al. 2017). A high prevalence of externalizing symptoms was previously documented among children referred to clinics for gender-identity related concerns (e.g., gender dysphoria; Cohen-Kettenis et al. 2003; Zucker et al. 2002, 2012). However, other research using smaller, community-based (Olson et al. 2016) and clinic-referred (Hill et al. 2010) samples indicated that TGD children's internalizing and externalizing symptoms did not fall into the clinical range, on average (i.e., scores were typically in the "normal" range; Hill et al. 2010; Olson et al. 2016). In addition, socially transitioned TGD children did not show higher levels of depressive symptoms relative to age-matched controls, although they did exhibit marginally higher levels of anxiety. Though it is unclear why differences existed across studies, one possibility noted by Hill et al. (2010) and Olson et al. (2016) is that the parents included in their samples were accepting of their TGD children as TGD, which may have positively affected children's ability to access and pursue transition. For example, all of the children in Olson et al.'s (2016) community-based sample had socially transitioned, which may explain the comparatively lower levels of internalizing and externalizing psychopathology in their sample, relative to general population and some clinic-referred TGD children who may have relatively less access to

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gender-affirmative care. TGD children who are able to transition may therefore be at lower risk for internalizing and externalizing symptoms relative to those who cannot. Importantly, the findings from Hill et al.'s (2010) and Olson et al.'s (2016) community-based research indicate that the presence of a TGD identity in childhood is not *necessarily* associated with internalizing and externalizing symptoms. Instead, intervening variables may interact to promote or buffer risk for such symptoms among TGD children. This points to a need to identify and test contextual factors contributing to internalizing and externalizing symptoms among TGD children, in order to understand what may place TGD children at elevated risk for poor mental health.

One category of contextual factors that may create or buffer risk for the development of internalizing and externalizing symptoms is relational functioning, such as the health of TGD children's peer and family relationships. There is strong evidence that peer relations in particular impact TGD children's mental health (Cohen-Kettenis et al. 2003). Peer relations captures children's experiences of being teased by, not getting along with, or not being liked by other children (as reported on the Child Behavior Checklist; Achenbach & Edelbrock, 1981). Poor peer relations was previously shown to be associated with adjustment problems such as psychological distress, internalizing, and externalizing symptoms among TGD children and adolescents (Cohen-Kettenis et al. 2003; de Vries et al. 2016). In Cohen-Kettenis et al.'s (2003) two subsamples of children ages six to 11 years old from Canada and the Netherlands referred to their clinics for gender identity concerns, poor peer relations was the strongest predictor of behavior problems in both subsamples. Among clinic-referred TGD adolescents, poor peer relations was associated with poorer functioning, globally, as rated by both parents and TGD adolescents, themselves (de Vries et al. 2016). Research noting an association between peer relations and internalizing and/or externalizing symptoms among TGD children underscore not only the increased frequency of harmful peer interactions among TGD children and adolescents, but also that these interactions have a deleterious impact on these children's mental health. However, factors that moderate the influence of poor peer relations on internalizing and externalizing symptoms among TGD youth, therefore amplifying or buffering peer relations' deleterious impact, are understudied. Identification of factors that intensify or attenuate the risk of poor peer relations would better enable identification of TGD children who are most at risk for developing internalizing and externalizing symptoms, or who are likely to be resilient to an identified stressor.

A relational context that may heighten or buffer risk introduced by poor peer relations is the healthy functioning of a child's family. Family functioning reflects the degree to which a family is able to identify and solve problems, communicate, and respond to one another effectively (Epstein et al. 1983). Although family functioning has not been extensively studied with TGD youth, there is clear precedent for the construct's relevance. Among cisgender children and adolescents, poor family functioning has been implicated in the development of and poor recovery from internalizing and externalizing psychopathology (Hughes et al. 2008; Ma et al. 2013; Stein et al. 2000). In addition, for TGD youth, sustainable access to formal social support, advocacy, and medical resources may depend upon a supportive and cohesive family environment (Riley et al. 2013). There is evidence that family support, a related but distinct construct that captures an individual's subjective experience of social support by family members, is associated with positive adjustment

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among transgender adults (Bauer et al. 2015; Davey et al. 2014). However, perceived support does not capture other family dynamics (e.g., communication; conflict; organization) that may also play a key role in the development of internalizing and externalizing symptoms among TGD children. For instance, families that generally struggle to communicate effectively, find workable solutions to problems, and derive little comfort from each other may have greater difficulty meeting their TGD child's needs (e.g., whether and how to support a child's transition). For this reason, it is necessary to test the role of family functioning specifically as it relates to internalizing and externalizing symptoms among TGD children.

Despite clear evidence that both peer and family relationships play a role in the psychological functioning of TGD youth, the extent to which peer relations and family functioning interact with one another has yet to be tested. Building on prior research, the present study focused on two aspects of TGD children's social worlds—peer relationships and family functioning—and tested family functioning as a moderator of the relation between peer problems and internalizing and externalizing symptoms in a sample of TGD children. To understand what factors were associated with distress among TGD children concurrently, as well as over time, we utilized cross-sectional and longitudinal path analyses to test the moderating effect of family functioning on the relation between peer problems and internalizing and externalizing symptoms. In both instances, we predicted that the relation between peer problems and internalizing and externalizing symptoms would be stronger among TGD youth with poorer caregiver-rated family functioning relative to those whose caregivers reported adequate family functioning. Among families that were functioning adequately, the relation between peer problems and internalizing and externalizing symptoms was hypothesized to be comparatively weaker, though still statistically significant.

Method

Participants

Participants were 49 primary caregivers of children who were TGD (including children with binary transgender, non-binary transgender, and gender-diverse identities and expressions; see Kuvalanka et al. 2017 for specifics on children's gender identities). Participants were recruited via online support networks for caregivers of TGD children and by word of mouth; thus, the current study uses a community sample. In order to be eligible for the study, the participant needed to be a parent or primary caregiver of a "transgender or gender-variant" child who was between the ages of 6 and 12 at baseline (baseline data were collected in 2011 and 2012).

Complete demographic information was unavailable for four caregivers at baseline; baseline demographic information for the remaining 45 caregivers and their children is reported in Table 1. At baseline, caregivers ranged in age from 29–67 ($M = 42.4$; $SD = 7.09$). Primary caregivers were predominantly White and heterosexual, though a number of caregivers were sexual minorities. Forty-one caregivers (91.1%) were cisgender women, 2 (4.4%) were cisgender men, and 2 (4.4%) described themselves as gender variant or gender fluid. Caregivers were generally highly educated. In terms of participants' relationship to the child,

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41 (91.1%) were the child's mother, 2 (4.4%) were their father, and 2 (4.4%) were their grandmother.

Of the 45 children in the study with demographic information, the majority were described as White by their caregivers. Children ranged in age from 6–12 years of age (M = 8.5; SD = 1.5). Twenty-eight of the children were assigned male at birth (AMAB), 17 were assigned female at birth (AFAB). Forty-one (91.1%) caregivers reported that they consulted a health care provider regarding their child's gender identity. Thirty-three (73.3%) caregivers reported their child had socially transitioned to their affirmed gender at baseline.

Procedure

All procedures performed in studies were in accordance with the ethical standards of the university's institutional review board and with the 1964 Helsinki declaration and its later amendments. Informed consent was obtained from all individual participants included in the study. Participants, who were the parents or primary caregivers of the child, completed a qualitative interview regarding their child and a battery of self-report measures at two time points. Caregivers agreed to follow-up interviews and questionnaires approximately every two years, and received gift cards as compensation. In the present study, baseline (T1) and Time 2 (T2) data are evaluated. The average period between T1 and T2 data collection was 2.84 years (M = 1038.24 days; SD = 77.81; Median = 1063.78 days). All measures except the Family Assessment Device (FAD) were administered at both time points. The FAD was added to the protocol at T2; T1 data is therefore unavailable.

Measures

Child behavior checklist, parent version (CBCL).—The CBCL is a 113-item self-report measure of children's behavior (Achenbach & Rescorla 2001) that assesses the frequency of internalizing (e.g., social withdrawal; worrying) and externalizing (e.g., truancy from school; physical fights). In the present study, we evaluated caregivers' reports of their child's internalizing and externalizing symptoms, reported as T scores. Consistent with prior literature, item #110 ("wishes to be the opposite sex"), was not included in scoring to avoid inflation of children's behavior problems (Cohen-Kettenis et al. 2003). The 33-item internalizing and 33-item externalizing subscales demonstrated good internal reliability. T1 CBCL internalizing α = .85 and T1 CBCL externalizing α = .91; T2 CBCL internalizing = .89 and T2 CBCL externalizing α = .90. T-scores between 60–63 are considered in the borderline or "at-risk" range; scores above 63 are considered to be in the clinical range.

Family assessment device (FAD).—The 12-item general functioning subscale of the family assessment device (Epstein et al. 1983) was administered at Time 2 to capture caregiver-rated family functioning. Sample items include questions such as, "we don't get along well together" and "in times of crisis we turn to each other for support" (reverse scored). In the current sample, T2 α = .90. The instrument was scored such that *low scores* on the "general functioning" scale of the FAD reflect *adequate* family functioning, whereas high scores indicate problematic family functioning. Family functioning scores were calculated by taking the mean score of the 12 items of the general functioning scale. Then, a

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total FF score was computed by multiplying the mean score by 12. Total scores of 24 and above indicate problematic family functioning.

Peer relations (PR).—Consistent with protocols used in prior research (Cohen-Kettenis et al. 2003; de Vries et al. 2016; Zucker et al. 1997), a peer relations subscale was created from items 25 ("Does not get along with other kids"), 38 ("Gets teased a lot"), and 48 (Not liked by other kids") of the caregiver-reported CBCL; these three items did not overlap with other subscales being utilized in analysis (i.e., internalizing or externalizing subscales). Cronbach's alpha for the peer relations subscale was reported to demonstrate adequate reliability in an adolescent sample (Zucker et al. 2012). In the present study, due to zero-inflation of T1 and T2 PR data, this variable was dichotomized. Those who were not reported to have peer problems by their caregivers (i.e., scores of "0" on all three items; n = 53.3% at T1 and 66.0% at T2) were coded as having "no peer problems," and those who reported any peer problems (i.e., scores of 1–2 on items 25, 38, *or* 48; N = 46.7% at T1 and 34.0% at T2) were coded as "at least some peer problems."

Data Analyses

Missing data.—The original data set included data from 49 caregivers. Of those, one (2.04%) was missing all T2 data, one (2.04%) was missing T2 FF data only, and four (8.16%) were missing all T1 questionnaires. This resulted in a final sample size of n = 48 for the cross-sectional path analysis (due to missingness on all T2 data for one caregiver), and n = 49 for longitudinal path analysis.

Analyses.—Data from the initial interview (T1) and the first follow up (T2) were completed at the time of analysis. All path analyses were conducted in Mplus version 8 using full information maximum likelihood estimation (FIML) and uncentered variables. First, bivariate correlations were computed between T1 and T2 peer problems, T2 family functioning, and T1 and T2 CBCL internalizing and externalizing T-scores. Second, a cross-sectional path analysis was run to test the relations between T2 peer problems, T2 family functioning, and their interaction on T2 internalizing and externalizing symptoms (see Figure 1 for a conceptual representation of the hypothesized model). Third, a longitudinal path analysis was conducted to test the effects of T1 peer problems, T2 family functioning, and their interaction on T2 internalizing and externalizing symptoms, controlling for T1 internalizing and externalizing symptoms. In both cross-sectional and longitudinal models, if the interaction term was not statistically significant, trimmed models were run testing only main effects. Statistically significant interactions were probed. Specifically, to test the conditional effects of peer functioning on symptoms, we conducted a simple slopes analysis in which we tested the simple effect of peer problems on symptoms at different levels of family functioning, the proposed moderator (−1 SD and +1 SD family functioning). To fully unpack the interaction in the cross-sectional model, we also conducted a simple slopes analysis in which we tested the conditional effect of family functioning on symptoms at different levels of reported problems in peer relationship (no reported peer problems vs. reported peer problems). Unstandardized betas are reported throughout.

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Results

Sample Characteristics

When reporting their child's internalizing symptoms at T1, 29 (63.0%) of caregivers reported a pattern of symptoms that fell into the nonclinical range, 4 (8.7%) in the at-risk range, and 13 (28.3%) in the clinical range. At T2, the caregivers of 29 children (63.0%) reported internalizing symptoms that fell in the nonclinical range, 5 (10.9%) in the "at-risk" range, and 12 (26.1%) in the clinical range.

Regarding externalizing problems at T1, 30 (65.2%) of caregivers endorsed a pattern of symptoms that indicated their children were in the nonclinical range for externalizing problems, 8 (17.4%) endorsed symptoms that fell in the at-risk range, and 7 (16.3%) reported symptoms that fell in the clinical range. At T2, 39 (83.0%) were assessed to be in the nonclinical range based on caregiver report, 1 (2.1%) was in the at-risk range, and 7 (14.9%) were in the clinical range. Using the FAD scoring guidelines indicating that a total score of 24 or greater indicates significant problems in a family's functioning. In the current sample, 10 (21.3%) of the 47 participants reported problematic family functioning at T2.

Bivariate Correlations

Bivariate correlation coefficients among variables were calculated, with missing data handled via pair-wise deletion. In general, peer problems, family functioning, internalizing symptoms, and externalizing symptoms were positively correlated with one another only when they were measured at the same time point. One exception to this pattern is that T1 externalizing symptoms were positively associated with T2 peer problems. Additionally, for the most part, the CBCL scores were also positively, significantly correlated with one another across time points. Bi-variate correlation coefficients are presented in Table 2.

Cross-Sectional Path Analysis

We tested whether T2 family functioning moderated the relation between T2 peer problems and T2 internalizing and externalizing symptoms. Importantly, the T2 peer problems X T2 family functioning interaction term was statistically significant for T2 internalizing symptoms, ($b = -1.21$, $SE = .52$, $p = .02$), but not T2 externalizing symptoms ($b = -.26$, $SE = .43$, $p = .54$). The results of the cross-sectional path analysis are presented in Table 3.

To test the conditional effects of peer problems on internalizing symptoms, we completed a simple slopes analysis in which we tested the simple effect of T2 peer problems on T2 internalizing symptoms at different levels of T2 family functioning, the proposed moderator (−1 SD and +1 SD family functioning). Please note that *low scores* on family functioning indicate *adequate functioning*, whereas *high scores* indicate *greater family distress*, and that "peer problems" indicates some degree of poor peer relations was endorsed by the primary caregiver. As reflected in Figure 2, there was a significant conditional effect of T2 peer problems on T2 internalizing symptoms when family functioning scores were low (i.e., when families were functioning adequately; $b = 18.03$, $SE = 4.26$, $p < .001$), but not when family functioning scores were high (i.e., when greater family problems were reported; $b = 4.95$, $SE = 3.85$, $p = .20$). For children who were *not* reported to have problems in their T2

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peer relations, there was a significant conditional effect of T2 family functioning on T2 internalizing symptoms, such that individuals with poorer family functioning reported greater internalizing symptoms ($b = .96$, $SE = .34$, $p < .01$). However, for children who *were* reported to have T2 peer problems, there was no significant relation between level of family functioning and T2 internalizing symptoms ($b = -.25$, $SE = .39$, $p = .52$).

In sum, these results indicate that children who were experiencing difficulty in one relational domain (i.e., peer problems or family functioning) showed greater internalizing symptomology relative to those who do not. That is, experiencing peer problems *or* family functioning was associated with internalizing symptomology. See Figure 2 for a graph of the interaction.

Finally, we then ran a trimmed model testing only the main effects of T2 peer problems and T2 family functioning on T2 externalizing symptoms. There was a significant effect for peer problems ($b = 10.42$, $SE = 2.44$, $p < .001$); a trend toward significance emerged for family functioning ($b = .35$, $SE = .21$, $p = .10$). The results of the trimmed model are presented in Table 3.

Longitudinal Moderation Models

Next, we tested whether T2 family functioning moderated the relation between T1 peer problems and T2 internalizing and externalizing symptoms, after accounting for internalizing and externalizing symptoms at baseline. The T1 peer problems X T2 family functioning interaction term did not emerge as a significant predictor of T2 internalizing symptoms ($b = -.23$, $SE = .59$, $p = .70$) or externalizing symptoms ($b = -.25$, $SE = .43$, $p = .56$). The results of the longitudinal model are presented in Table 4.

We then ran a trimmed model testing the main effects of T1 peer problems and T2 family functioning on T2 internalizing and externalizing symptoms, controlling for T1 internalizing and externalizing symptoms. The results revealed a non-significant trend for the effect of T1 internalizing symptoms ($b = .31$, $SE = .18$, $p = .09$) on T2 internalizing symptoms. There was a significant effect for T1 externalizing symptoms ($b = .57$, $SE = .14$, $p < .001$) and a non-significant trend for the effect of T2 family functioning ($b = .36$, $SE = .21$, $p = .08$) on T2 externalizing symptoms. The results of the trimmed model are presented in Table 4.

Discussion

The present study focused on TGD children, given that some prior research has shown that this population may be disproportionately at risk for developing psychopathology in childhood and adolescence (Aitken et al. 2016; Steensma et al. 2014). Specifically, the present study tested the interactive effects of peer problems and family functioning on internalizing and externalizing symptoms among a community-based sample of TGD youth. The goal of the study was to better understand whether peer and family contexts interact to create unique risk for internalizing and externalizing symptoms among TGD children.

Contrary to study hypotheses, poor family functioning did not amplify the effects of peer problems, and adequate family functioning did not buffer the effects of peer problems.

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Instead, findings indicated that children whose caregivers reported their children were experiencing peer problems scored relatively high on the internalizing subscale of the CBCL (i.e., above the "at-risk" cutoff), regardless of the family's current functioning. This finding echoed previous studies' findings that problems with peer relations are a strong predictor of TGD children's and adolescents' well-being (Cohen-Kettenis et al. 2003; de Vries et al. 2016). Extending the findings of previous research, children in our study whose families were reported to be experiencing poor family functioning, but who were *not* experiencing problems in their peer relations, also scored relatively high on the internalizing subscale of the CBCL. This suggests that both peer and family relationships are independently related to TGD children's current internalizing symptoms. Even if a child's family was functioning well, peer problems were still associated with internalizing symptoms, and even if a child was not experiencing peer problems, poor family functioning was associated with internalizing symptoms. That is, problems in *either* social area (peer or family) were associated with clinically significant internalizing symptoms. Finding that difficulty in one relational context (regardless of health in the other) is associated with greater internalizing symptoms, challenges conventional wisdom. Our finding suggests that a well-functioning family may not buffer the deleterious impact of negative peer interactions, and that positive relationships with peers may not offset the impact of challenging family dynamics. Instead, it underscores the need for TGD children's peer and family contexts to *both* be positive, as problems in either context are associated with internalizing symptoms. Children's social relationships are a system in which they are embedded, and the presence of peer problems and poor family functioning are therefore likely to affect children's internalizing symptoms.

Interestingly, in the trimmed T2 cross-sectional model, T2 peer problems was identified as a significant predictor of T2 externalizing symptoms, whereas the influence of T2 family functioning was not a statistically significant predictor (i.e., only a trend was observed). This relatively weaker impact of family functioning on externalizing symptoms is consistent with past research indicating that among siblings, non-shared environmental factors (e.g., peer group) is more robustly associated with functioning than shared environmental factors (e.g., family discord at a specific time point; Turkheimer, 2004).

The longitudinal hypothesis that T2 family functioning would moderate the relation between T1 peer problems and change in internalizing and externalizing symptoms was not supported. It may be that peer problems are fluid rather than stable across time, and is therefore not a meaningful predictor of internalizing symptomology over a period of time as lengthy as that of the current study (i.e., 3 years). Future research should further investigate the salience of peer relations—along with other potentially meaningful variables, such as family and school support—in relation to the well-being of TGD youth as they grow and develop, and as their environments change.

Strengths and Limitations

Strengths of the current study included the use of a community sample of parents with TGD children, and the use of longitudinal data to test predictors of internalizing and externalizing symptoms over time. Peer relations, family functioning, and psychological symptoms were assessed using established measures of these constructs. The current study built upon past

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research by formally testing whether children's peer and family contexts interacted to predict internalizing and externalizing symptoms, something that had not been examined previously. There are relatively few studies focusing on TGD children, and even fewer focusing on factors that may promote vs. buffer risk of developing psychopathology. Further, many studies are retrospective in nature, and therefore may not accurately capture peer relations, family functioning, and mental health symptoms as they occurred in childhood.

There were also a number of limitations that must be considered. The current sample is predominantly White, wealthy, and highly educated, and the majority of the children socially transitioned prior to or during the course of data collection. The racial and financial privilege of the current sample is not reflective of the overall population, and the results of the present study may not be generalizable to the majority of TGD children in the US, who may not have the financial ability or support to pursue transition, if it is desired. Because the families in the current sample may have been insulated from a number of stressors that are commonly faced by less privileged members of the US population, their overall stress and the prevalence of psychopathology may be lower than that of many families with TGD children. As commonly occurs in research focusing on children and their caregivers, the caregiver respondents were almost exclusively women, and the vast majority were the child's mother. Future research would benefit from including and focusing specifically on fathers and nonbinary parents of TGD children, and whether assessments of children's and families' functioning, and the results of the present study, are consistent across these groups. Finally, the degree to which specific support and acceptance of children's TGD identity was not formally assessed. Future research should consider the extent to which family functioning *in general* and family support focused *specifically* on TGD identity occur in isolation vs. in tandem. That is to say, support of the child's TGD identity may occur in the absence of overall family cohesion, and vice versa. Related, whether peer problems reflect difficulties that result from general interpersonal difficulties vs. bullying, teasing, and/or rejection specifically related to the child's TGD identity was not assessed. Therefore, the extent to which these children experienced gender-related discrimination, and the impact of that discrimination on their internalizing/externalizing symptoms, could not be determined. Further research that differentiates factors such as support and discrimination related to a TGD child's gender identity or expression from children's overall interpersonal skills and functioning is therefore needed to disentangle the extent to which these factors overlap vs. diverge. The current sample, though novel, was also small and may have been underpowered to detect statistically significant effects. Because T1 family functioning data was not collected in the present study, it was also not possible to test the role of family functioning over time. Finally, the current study relied exclusively on caregiver ratings of peer relations, family functioning, and children's internalizing and externalizing symptoms. Therefore, future research including the perspectives of TGD children themselves is needed to gain a more comprehensive understanding of these children's experiences.

Future Directions

Notwithstanding these limitations, the current work adds to the growing body of literature underscoring the need for TGD children to have positive peer and family relationships in childhood. Parents, school personnel, and clinicians should be advised of the importance of

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multiple relational contexts and to not assume that if, for example, the family dynamics of TGD youth are positive that the school climate in which peer relationships operate are not of primary concern, or that the reverse is true. Knowledge of contextual factors that are associated with clinically significant internalizing symptoms may facilitate identification of children who are at risk for or experiencing such symptoms, but who appear to be functioning adequately (e.g., those with observable indicators of distress, such as tearfulness). Acknowledging and appropriately addressing negative peer experiences in particular, especially bullying and teasing, may be key in preventing mental health problems among TGD children. The current study's findings are consistent with reports of transgender adults who identify acceptance, support, and the provision of access to psychotherapy and medical intervention as playing a key role in their adjustment as children (Riley et al. 2013); this underscores the need to listen to the voices TGD children, adolescents, and adults regarding the factors that most impact their wellbeing.

Although TGD individuals point to the importance of positive peer relationships in childhood and adolescence, the longitudinal model did not support this variable as a prospective predictor of internalizing and externalizing symptoms over time. Peer relations, at least in this sample, appear to be malleable over time; that is to say, experiencing peer problems at an early time point in childhood (e.g., 6–12 years of age) may not be a meaningful predictor of subsequent internalizing and externalizing problems. The lack of support for peer problems as a prospective predictor of TGD children's adjustment also indicates that other factors carry additional weight in predicting psychological symptoms, over time. For example, structural aspects of minority stress and discrimination due to pervasive societal stigma toward TGD individuals may be more salient in predicting mental health outcomes (Bockting et al. 2013). Of course, given the relatively stronger associations between variables measured at the same time point, it is also possible that the relations between peer problems, family functioning, and psychological symptoms are not prospectively, causally linked.

Finally, understanding the ways in which structural factors affect the relational contexts in which TGD children operate (e.g., peer and family relationships) is necessary to understand the emergence of internalizing and externalizing psychopathology in these children. That is to say, future research testing the ways in which the micro- and macro- systems in which TGD children are embedded interact is necessary to gain a more holistic understanding of TGD children's outcomes and experiences.

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Highlights:

- The impact of peer and family functioning on TGD youths' mental health was tested.
- The presence of poor peer *or* family functioning was associated with internalizing symptoms.
- Poor peer (but not family) functioning was associated with externalizing symptoms.
- Strength in one relational domain may not protect against difficulty in the other.

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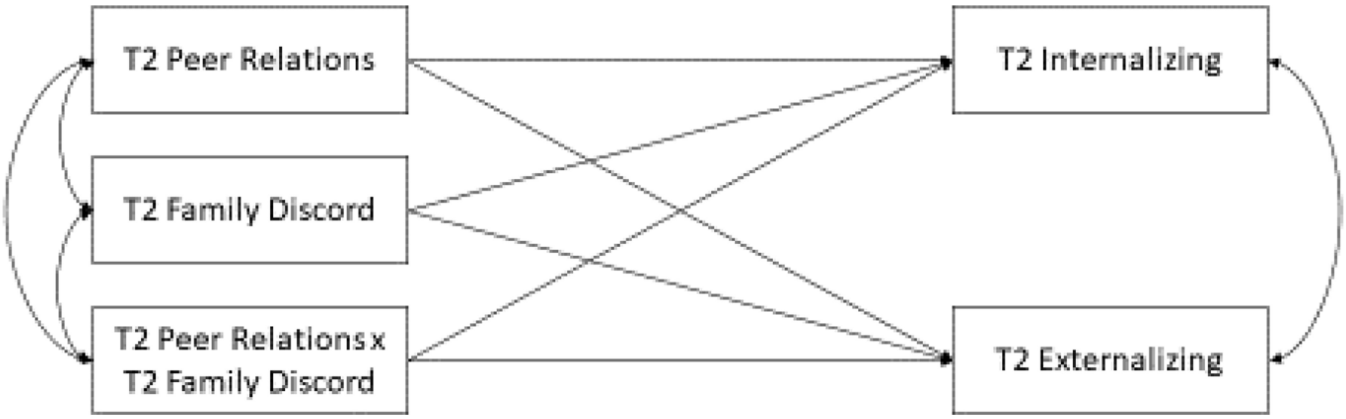

Figure 1.

Conceptual diagram of cross-sectional path analysis T2 peer relations, T2 family functioning, and T2 peer relations x T2 family functioning on T2 internalizing and T2 externalizing symptoms

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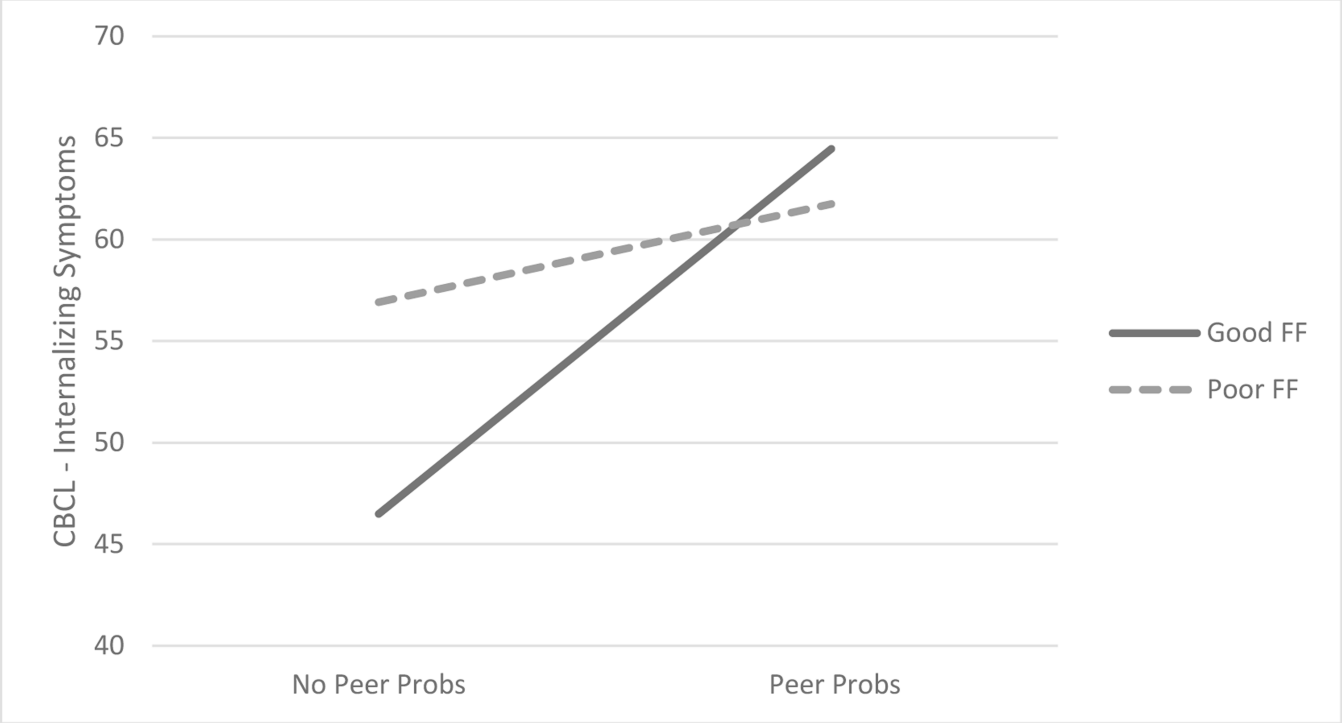

Figure 2.
Effect of T2 Peer Problems X T2 Family Functioning (FF) on T2 CBCL Internalizing T-Score

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Table 1

Descriptive Statistics for Sample Demographics at Time 1

Variable	Mean (SD)/N (%)	
	Caregivers (n=45)	*Children (n=45)*
Age	42.4 (7.1)	8.5 (1.8)
Race/Ethnicity		
White	43 (95.6%)	36 (80.0%)
Latinx; Latinx & White	1 (2.2%)	5 (11.1%)
Native American & White	1 (2.2%)	2 (4.4%)
White & Other	--	2 (4.4%)
Education		
GED	1 (2.2%)	--
Technical/Trade School	1 (2.2%)	--
Some College	4 (8.9%)	--
Associate Degree	3 (6.7%)	--
Bachelor's Degree	16 (35.6%)	--
Some Graduate Work	4 (8.9%)	--
Graduate Degree	16 (35.6%)	--
Sexual Orientation		
Heterosexual	34 (75.5%)	--
Lesbian	3 (6.7%)	--
Bisexual/Pansexual	8 (17.8%)	--
Assigned Female at Birth	43 (95.6%)	17 (37.8%)
Gender Identity		
Cisgender	43 (95.6%)	--
Gender fluid/gender-variant	2 (4.4%)	--
Binary trans	--	31 (68.9%)
Nonbinary/Other	--	14 (31.1%)
Transitioned Socially		
Yes	--	33 (73.0%)
Gender Dysphoria Diagnosis (Yes)	--	31 (68.9%)

Note: Of the total sample (N=49), 45 completed T1 demographics (shown here).

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Table 2

Descriptive Statistics and Bivariate Relations

Variable	Mean or %	SD	1	2	3	4	5	6	7
1. T1 Peer Problems	46.7%	--	--	.23	.22	.37*	.52**	.26	.22
2. T2 Peer Problems	34.0%	--		--	.26	.22	.37*	.50**	.57**
3. T2 Family Functioning	18.52	5.43			--	.27	.27	.32*	.33*
4. T1 CBCL Internalizing	55.78	10.71				--	.57**	.43**	.33*
5. T1 CBCL Externalizing	52.96	11.11					--	.37*	.61***
6. T2 CBCL Internalizing	54.68	11.54						--	.64***
7. T2 CBCL Externalizing	49.89	9.57							--

Note: For descriptive statistics, Peer Problems refers to children whose parents endorsed some degree of problems in their peer relations. For bivariate correlations, the Peer Problems variables were dichotomized as 0 vs. 1. Spearman's rho values are provided to reflect the correlations between dichotomized peer relations variables and other model variables (i.e., family functioning and CBCL internalizing and externalizing t-scores). Pearson's product-moment *r* values are presented to reflect the correlations between family functioning and CBCL internalizing and externalizing t-scores.

* $p < .05$

** $p < .01$

*** $p < .001$

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Table 3

Cross-sectional Path Analysis Predicting Time 2 CBCL Internalizing and Externalizing Symptoms (N = 48)

	T2 Internalizing Symptoms				T2 Externalizing Symptoms			
	B	**SE(B)**	**t**	**R^2**	**B**	**SE(B)**	**t**	**R^2**
Full Model								
				.36				*.36*
Intercept	33.92	6.11	5.55***		37.97	5.06	7.51***	
T2 Peer Problems	33.81	10.28	3.29**		15.36	8.51	1.81†	
T2 Family Functioning	.96	.34	2.83**		.46	.28	1.65†	
T2 Peer Problems X T2 Family Functioning	−1.21	.52	−2.34*		−.26	.43	−.61	
Trimmed Model								
								.36
Intercept	--	--	--		39.90	3.94	10.12***	
T2 Peer Problems	--	--	--		10.42	2.44	4.27***	
T2 Family Functioning	--	--	--		.35	.21	1.65†	

† $p \leq .10$

* $p < .05$.

** $p < .01$.

*** $p < .001$

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Table 4

Longitudinal Path Analysis Predicting Time 2 CBCL Internalizing and Externalizing Symptoms (N = 49)

	T2 Internalizing Symptoms				T2 Externalizing Symptoms			
	B	**SE(B)**	**t**	**R^2**	**B**	**SE(B)**	**t**	**R^2**
Full Model								
				.25				*.42*
Intercept	19.72	10.97	1.80†		14.73	7.92	1.86†	
T1 Internalizing Symptoms	.33	.19	1.73†		−.03	.14	−.22	
T1 Externalizing Symptoms	.13	.19	.79		.56	.14	4.07***	
T1 Peer Problems	5.18	11.60	.45		1.81	8.28	.22	
T2 Family Functioning	.52	.38	1.38		.47	.27	1.72†	
T1 Peer Problems X T2 Family Functioning	−0.23	.59	−.39		−.25	.42	−.59	
Trimmed Model								
				.25				*.42*
Intercept	21.76	9.67	2.25*		16.95	7.01	2.42*	
T1 Internalizing Symptoms	.31	.18	1.68†		−.05	.13	−.35	
T1 Externalizing Symptoms	.14	.19	.75		.57	.14	4.16***	
T1 Peer Problems	.93	3.70	.25		−2.79	2.65	−1.06	
T2 Family Functioning	.42	.28	1.50		.36	.21	1.76†	

† $p \leq .10$

* $p < .05$.

** $p < .01$.

*** $p < .00$